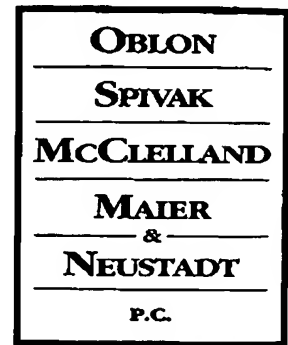


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September 28, 2006



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Alexandria, VA

ATTORNEYS AT LAW  
KATHLEEN A. MORSBERGER  
CONTROLLER  
(703) 412-6494  
KMORSBERGER@OBLON.COM

Attn: Refund Department

Re: Deposit Account Number 150030

Dear Sir or Madame:

Enclosed is a copy of a portion of our Deposit Account Statement of June 2006. Please review the highlighted charge on **Serial Number 10/826, 374 in the amount of \$200.00 on fee code number 1201.**

This charge is in error as there was only one Independent Claim remaining after the June 15, 2006 Admentment. Please review the highlighted copy of the claims as filed with the Amendment.

**Please review this application and kindly refund \$200.00 to deposit account number 150030.** Copies of the appropriate paperwork are attached. If you have any questions, please contact Scott Lohr at (703) 412-6472. Thank you for your assistance.

Sincerely,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

A handwritten signature in black ink, appearing to read "S. Lohr".

Scott Lohr

Enclosure: Deposit Account Statement

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Deposit Account Statement

Requested Statement Month:

June 2006

Deposit Account Number:

150030

Name:

NORMAN F. OBLON

Attention:

Address:

1940 DUKE STREET

City:

ALEXANDRIA

State:

VA

Zip:

22314

Country:

UNITED STATES

| DATE    | SEQ | POSTING<br>REF TXT | ATTORNEY<br>DOCKET<br>NBR | FEE<br>CODE | AMT       | BAL         |
|---------|-----|--------------------|---------------------------|-------------|-----------|-------------|
| ✓ 06/01 | 3   | 10974831           | 261039US0                 | 1202        | \$300.00  | \$20,715.71 |
| 06/01   | 12  | 10543930           | 276244US0PCT              | 1615        | -\$650.00 | \$21,365.71 |
| ✓ 06/01 | 12  | 10553124           | 279689US0XPCT             | 1615        | \$50.00   | \$21,315.71 |
| 06/01   | 108 | 11443217           | 291721US8                 | 1011        | \$300.00  | \$21,015.71 |
| 06/01   | 109 | 11443217           | 291721US8                 | 1111        | \$500.00  | \$20,515.71 |
| 06/01   | 110 | 11443217           | 291721US8                 | 1311        | \$200.00  | \$20,315.71 |
| 06/01   | 111 | 11443217           | 291721US8                 | 1201        | \$200.00  | \$20,115.71 |
| 06/01   | 112 | 11443217           | 291721US8                 | 1051        | \$130.00  | \$19,985.71 |
| 06/01   | 113 | 11443217           | 291721US8                 | 1081        | \$250.00  | \$19,735.71 |
| 06/01   | 172 | 11311239           | 283282US/KQU              | 8007        | \$20.00   | \$19,715.71 |
| 06/01   | 173 | 11311239           | 283282US/KQU              | 8013        | \$25.00   | \$19,690.71 |
| 06/02   | 1   | 11443217           | 291721US8                 | 1011        | -\$300.00 | \$19,990.71 |
| ✓ 06/02 | 2   | 09566958           | 0557-4968-0               | 1806        | \$180.00  | \$19,810.71 |
| 06/02   | 2   | 11443217           | 291721US8                 | 1111        | -\$500.00 | \$20,310.71 |
| 06/02   | 3   | 11443217           | 291721US8                 | 1311        | -\$200.00 | \$20,510.71 |
| 06/02   | 4   | 11443217           | 291721US8                 | 1201        | -\$200.00 | \$20,710.71 |
| 06/02   | 5   | 11443217           | 291721US8                 | 1051        | -\$130.00 | \$20,840.71 |
| 06/02   | 6   | 11443217           | 291721US8                 | 1081        | -\$250.00 | \$21,090.71 |
| ✓ 06/05 | 1   | 10792607           | 245526US2                 | 1806        | \$180.00  | \$20,910.71 |
| ✓ 06/05 | 2   | 09585870           | 203744US                  | 1202        | \$90.00   | \$20,820.71 |
| 06/05   | 27  | 11418218           | 290097US0                 | 1202        | -\$150.00 | \$20,970.71 |
| ✓ 06/05 | 123 | 11230473           | 275538US6CONT             | 1814        | \$130.00  | \$20,840.71 |
| ✓ 06/05 | 124 | 10278493           | 282693US                  | 1251        | \$120.00  | \$20,720.71 |
| ✓ 06/05 | 152 | 11445382           | 291998US23DIV             | 1201        | \$800.00  | \$19,920.71 |
| ✓ 06/05 | 195 | 10416882           | 236616US0PCT              | 1202        | \$500.00  | \$19,420.71 |
| ✓ 06/06 | 2   | 09961255           | 213954US2                 | 1252        | \$30.00   | \$19,390.71 |
| ✓ 06/06 | 3   | 10937566           | 258838US0CONT             | 1806        | \$180.00  | \$19,210.71 |

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|             |            |                     |      |            |             |
|-------------|------------|---------------------|------|------------|-------------|
| ✓ 06/16 1   | 10566403   | 283723US0PCT        | 1615 | \$50.00    | \$23,355.71 |
| ✓ 06/16 20  | 09657907   | 197115 US           | 9204 | -\$740.00  | \$24,095.71 |
| 06/19 1     | 10399038   | 236175US6PCT        | 1202 | \$100.00   | \$23,995.71 |
| ✓ 06/19 1   | 10482332   | 246058US3XPCT       | 1251 | \$120.00   | \$23,875.71 |
| ✓ 06/19 5   | 10614814   | 240046US2S          | 1201 | \$200.00   | \$23,675.71 |
| 06/19 12    | 11435780   | 290955US96CONT      | 1202 | \$1,200.00 | \$22,475.71 |
| 06/19 27    | 10529478   | 267258              | 2202 | -\$175.00  | \$22,650.71 |
| 06/19 129   | 10468107   | 240712US0XPCT       | 1252 | -\$450.00  | \$23,100.71 |
| 06/20 1     | 10675816   | 250882 US           | 1201 | \$600.00   | \$22,500.71 |
| 06/20 2     | 10675816   | 250882 US           | 1201 | \$1,200.00 | \$21,300.71 |
| 06/20 3     | 10675816   | 250882 US           | 1202 | \$350.00   | \$20,950.71 |
| 06/20 7     | 10319497   | 231524US-2SR        | 1811 | -\$100.00  | \$21,050.71 |
| 06/20 191   | 60712389   | 277774US/KQU        | 8007 | \$60.00    | \$20,990.71 |
| 06/21 1     | 10826374   | 251990US0           | 1201 | \$200.00   | \$20,790.71 |
| 06/21 1     | 10311220   | 231713US6PCT        | 1251 | \$120.00   | \$20,670.71 |
| 06/21 31    | 10158145   | 223700US0           | 1202 | \$300.00   | \$20,370.71 |
| 06/21 32    | 10158145   | 223700US0           | 1253 | \$1,020.00 | \$19,350.71 |
| ✓ 06/21 103 | 60788726   | 289343US            | 1052 | \$50.00    | \$19,300.71 |
| 06/22 80    | 6114391    | 4158-0013           | 8013 | \$25.00    | \$19,275.71 |
| ✓ 06/23 1   | 08883492   | 5244-054-2X         | 1806 | \$180.00   | \$19,095.71 |
| 06/23 3     | 10493313   | 250869US3PCT        | 1201 | \$200.00   | \$18,895.71 |
| ✓ 06/23 3   | 10550857   | 278868US0PCT        | 1681 | \$750.00   | \$18,145.71 |
| ✓ 06/23 39  | 11471702   | 292826US0DIV        | 1203 | \$100.00   | \$18,045.71 |
| 06/23 219   | 60699374   | 275161US/KQU        | 8007 | \$20.00    | \$18,025.71 |
| ✓ 06/26 18  | 60812077   | 292385US96PROV      | 1085 | \$250.00   | \$17,775.71 |
| 06/26 125   | 0174410298 | 257086WO/TEP/FF     | 8014 | \$25.00    | \$17,750.71 |
| ✓ 06/27 3   | 10478473   | 245656US0PCT        | 1806 | \$180.00   | \$17,570.71 |
| ✓ 06/27 20  | 10821950   | 251327US3X          | 8001 | \$30.00    | \$17,540.71 |
| 06/29 1     | 10182776   | 226049US0PCT        | 1811 | -\$100.00  | \$17,640.71 |
| ✓ 06/29 2   | 10349081   | 232012US-20DIV      | 2501 | \$700.00   | \$16,940.71 |
| ✓ 06/29 3   | 10349081   | 232012US-20DIV      | 1504 | \$300.00   | \$16,640.71 |
| ✓ 06/29 4   | 10349081   | 232012US-20DIV      | 8001 | \$30.00    | \$16,610.71 |
| ✓ 06/29 216 | 60705485   | 276698US/KQU        | 8007 | \$60.00    | \$16,550.71 |
| 06/29 217   | 60707555   | 276990US/KQU        | 8007 | \$100.00   | \$16,450.71 |
| ✓ 06/30 1   | 10438013   | 237622US0           | 1806 | \$180.00   | \$16,270.71 |
| 06/30 5     | 10400697   | 233531US0           | 1806 | -\$180.00  | \$16,450.71 |
| 06/30 8     | 10433611   | 237944USOPCT        | 1806 | -\$180.00  | \$16,630.71 |
| 06/30 9     | 10200164   | 225886US2SRD        | 1806 | -\$180.00  | \$16,810.71 |
| 06/30 10    | 10262317   | 228930US0           | 1806 | -\$180.00  | \$16,990.71 |
| 06/30 11    | 10832422   | 252538US3           | 1806 | -\$180.00  | \$17,170.71 |
| 06/30 299   | 60528181   | 266255IN (FF.DEPT.) | 8007 | \$20.00    | \$17,150.71 |
| 06/30 305   | 0124790388 | 200781US/KQU        | 8014 | \$25.00    | \$17,125.71 |

| START       | SUM OF      | SUM OF      | END         |
|-------------|-------------|-------------|-------------|
| BALANCE     | CHARGES     | REPLENISH   | BALANCE     |
| \$21,015.71 | \$20,525.00 | \$16,635.00 | \$17,125.71 |

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Docket No. 251990US0

IN RE APPLICATION OF: Takayuki HAMADA, et al.

SERIAL NO: 10/826,374

FILED: April 19, 2004

FOR: PRODUCTION METHOD FOR OPTICALLY ACTIVE N-ARYL-BETA-AMINO ACID COMPOUNDS



*251990US0*

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Transmitted herewith is an Amendment and Request for Reconsideration w/attached Substitute Abstract in the above-identified application.

- ☐ No additional fee is required
- ☐ Small entity status of this application under 37 C.F.R. §1.9 and §1.27 is claimed.
- ☒ Additional documents filed herewith: Request for Extension of Time - Two Months  
Information Disclosure Statement  
Form PTO 1449  
Cited References (3)

The Fee has been calculated as shown below:

| CLAIMS           | CLAIMS<br>REMAINING |  | HIGHEST<br>NUMBER<br>PREVIOUSLY<br>PAID | NO.<br>EXTRA<br>CLAIMS          | RATE      | CALCULATIONS |        |
|------------------|---------------------|--|---|---------------------------------|-----------|--------------|--------|
| TOTAL            | 18                  | MINUS  | 20                                      | 0                               | x \$50 =  | \$0.00       |        |
| INDEPENDENT      | 1                   | MINUS  | 3                                       | 0                               | x \$200 = | \$0.00       |        |
| APPLICATION SIZE |                     | MINUS  | 100                                     | 0<br>(each addtl. 50<br>sheets) | x \$250 = | \$0.00       |        |
|                  |                     | <input type="checkbox"/> MULTIPLE DEPENDENT CLAIMS                   |   |                                 | + \$360 = | \$0.00       |        |
|                  |                     | TOTAL OF ABOVE CALCULATIONS  |   |                                 |           |              | \$0.00 |
|                  |                     | <input type="checkbox"/> Reduction by 50% for filing by Small Entity |   |                                 |           |              | \$0.00 |
|                  |                     | TOTAL  |   |                                 |           |              | \$0.00 |

- ☒ Credit card payment form is attached to cover the fees in the amount of \$630.00
- ☒ Please charge any additional Fees for the papers being filed herewith and for which no check or credit card payment is enclosed herewith, or credit any overpayment to deposit Account No. 15-0030. A duplicate copy of this sheet is enclosed.
- ☒ If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time may be charged to Deposit Account No. 15-0030. A duplicate copy of this sheet is enclosed.

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

*Stephen G. Baxter*

Stephen G. Baxter  
Registration No. 32,884

Customer Number

22850

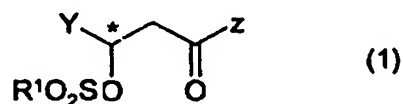
Tel. (703) 413-3000  
Fax. (703) 413-2220  
(OSMMN 05/03)

Vincent K. Shier, Ph.D.  
Registration No. 50,552

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AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A ~~production method of producing an optically active N-aryl-~~  
 ~~$\beta$ -amino acid compound characterized in that comprising reacting an~~ optically active  
sulfonate ~~compounds~~ compound represented by the following general formula (1):



~~{in this formula, wherein~~

Y indicates is an optionally substituted methyl group or aryl group,

Z stands ~~for~~ is a hydroxy group, optionally substituted amino group, optionally  
substituted alkoxy group or optionally substituted aryloxy group,

R<sup>1</sup> represents is an optionally substituted alkyl group with a carbon atom number  
from 1 to 10, an optionally substituted aryl group with a carbon atom number from  
6 to 15, an optionally substituted aralkyl group with a carbon atom number from 7  
to 20. ~~Further, 20, and~~

\* indicates an ~~optically active~~ chiral carbon atom, in the R or S ~~configuration}~~  
configuration;

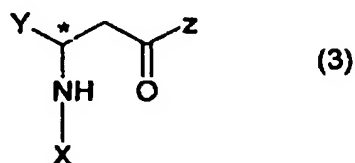
~~are reacted with an aromatic amine represented by the following formula (2);~~



~~{in this formula wherein~~

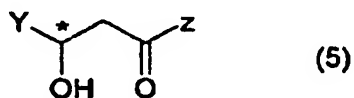
X ~~stands for~~ is an optionally substituted aryl group with a carbon atom number from 6 to 15 or an optionally substituted heteroaromatic group with a carbon atom number from 3 to ~~15~~ 15;

to produce ~~the~~ said optically active N-aryl- $\beta$ -amino acid ~~compounds~~ compound,  
wherein said optically active N-aryl- $\beta$ -amino acid compound is represented by the following  
formula ~~(3)~~ (3):



[in this formula wherein X, Y, Z and \* have the same meaning as described above.]  
are as defined above.

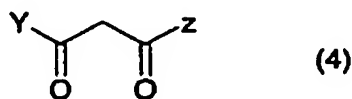
2. (Currently Amended) ~~A production~~ The method as claimed in claim 1 further  
comprising a process, in which by the reaction of producing a compound of formula (1) by  
reacting an optically active  $\beta$ -hydroxycarboxylic acid ~~compounds~~ compound represented by  
the following formula (5):



[in this formula, wherein Y, Z and \* show the same meaning as described above.]  
are as defined in claim 1;

with sulfonyl chlorides or sulfonic acid anhydride, the optically active sulfonate compounds represented by the above described formula (1) are manufactured.

3. (Currently Amended) ~~A production~~ The method as claimed in claim 2 further comprising a process, in which by the producing a compound of formula (5) by contacting an asymmetric reduction of a  $\beta$ -keto carboxylic acid compounds compound represented by the following formula (4)



~~{in this formula, wherein Y and Z have the same meaning as described above.}~~ are as defined in claim 2;

~~in the presenece of~~ with a catalyst or enzyme, the optically active  $\beta$ -hydroxycarboxylic acid compounds represented by the above described formula (5) are manufactured.

4. (Currently Amended) ~~A production~~ The method for the optically active N-aryl  $\beta$ -amino acid compounds as claimed in any of the claims 1 to 3 characterized in that claim 1, wherein R<sup>1</sup> in the sulfonate compounds, represented by the above described compound of formula (1); (1) is a trifluoromethyl, methyl or p-tolyl group.

5. (Currently Amended) ~~A production~~ The method for the optically active N-aryl  $\beta$ -amino acid compounds as claimed in claim 4 characterized in that, wherein R<sup>1</sup> in the

sulfonate compounds, represented by the above-described compound of formula (1), (1) is trifluoromethyl.

6. (Currently Amended) ~~A production~~ The method for the optically active N-aryl- $\beta$ -amino acid compounds as claimed in any of the claims 1 to 5 characterized in that as claimed in claim 1, wherein in the sulfonate compounds, represented by the above-described compound of formula (1), (1) the relevant sulfonyl group is introduced by using trifluoromethanesulfonic acid anhydride as a sulfonylation agent and that R<sup>1</sup> is a trifluoromethyl group.

7. (Currently Amended) ~~A production~~ The method for the optically active N-aryl- $\beta$ -amino acid compounds as claimed in any of the claims 1 to 6 characterized in that the relevant reaction is carried out as claimed in claim 1, wherein said reacting is at a temperature of 5°C and or less.

8. (New) The method as claimed in claim 2, wherein R<sup>1</sup> in the sulfonate compound of formula (1) is a trifluoromethyl, methyl or p-tolyl group.

9. (New) The method as claimed in claim 8, wherein R<sup>1</sup> in the sulfonate compound of formula (1) is trifluoromethyl.



10. (New) The method as claimed in claim 2, wherein in the sulfonate compound of formula (1) the sulfonyl group is introduced by using trifluoromethanesulfonic acid anhydride as a sulfonylation agent and  $R^1$  is a trifluoromethyl group.

11. (New) The method as claimed in claim 2, wherein said reacting is at a temperature of 5°C or less.

12. (New) The method as claimed in claim 3, wherein  $R^1$  in the sulfonate compound of formula (1) is a trifluoromethyl, methyl or p-tolyl group.

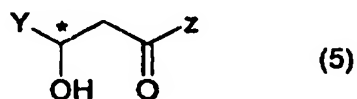
13. (New) The method as claimed in claim 12, wherein  $R^1$  in the sulfonate compound of formula (1) is trifluoromethyl.

14. (New) The method as claimed in claim 3, wherein in the sulfonate compound of formula (1) the sulfonyl group is introduced by using trifluoromethanesulfonic acid anhydride as a sulfonylation agent and  $R^1$  is a trifluoromethyl group.

15. (New) The method as claimed in claim 3, wherein said reacting is at a temperature of 5°C or less.

16. (New) The method as claimed in claim 3, wherein said catalyst is a Ru-binap catalyst.

17. (New) The method of claim 1, wherein an optically active  $\beta$ -hydroxycarboxylic acid compound represented by formula (5):



wherein Y, Z and \* are as defined in claim 1;

is reacted with a sulfonylating reagent in the presence of an organic tertiary amine to produce said optically active sulfonate compound represented by the formula (1).

18. (New) The method of claim 17, wherein said optically active sulfonate compound represented by the formula (1) is reacted with said aromatic amine represented by formula (2) without isolation from the reaction mixture.

Document code: WFEE

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